FRESH ACHIEVEMENTS IN

KOREAN MEDICINE

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CONTENTS

MEDICAL SCIENCE IN THE SERVICE OF THE PEOPLE . . 5

GREAT DISCOVERY OF THE SUBSTANCE OF KYUNGRAK 11

NO MORE MEASLES 17

NEW SUCCESS IN THE CURE OF THE AFTER EFFECTS OF INFANTILE PARALYSIS 22

NEW RESULTS IN RESTORING LOST EYESIGHT 26

HUNCHBACK STRAIGHTENED 30

BRAIN DISEASE CONQUERED 35

PULMONARY DISTOMIASIS COMPLETELY ELIMINATED . . 39

GLORIOUS MEDICAL HERITAGE OF KOREA 43

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NEW RESULTS IN RESTORING LOST EYESIGHT 26

HUNCHBACK STRAIGHTENED 30

BRAIN DISEASE CONQUERED 35

PULMONARY DISTOMIASIS COMPLETELY ELIMINATED . . 39

GLORIOUS MEDICAL HERITAGE OF KOREA 43

MEDICAL SCIENCE IN THE SERVICE OF THE PEOPLE

People want to enjoy good health and live to a great age. In carrying this earnest desire of the people into reality, the public health services play an important role.

Since Korea's liberation from the yoke of Japanese imperialist rule on August 15, 1945, our public health services have registered great successes. Compared with 1944, the previous year of the fall of Japanese imperialism, in 1962 the number of hospital beds increased 41.6 times and the number of doctors and assistant doctors 18.6 times.

In the pre-liberation days 60 per cent of the sub-counties in our country were without a doctor, but at present there is no doctorless ri (the lowest administrative unit) in the northern part of the country covered with a vast network of medical institutions, prophylactic and curative.

Remarkable progress has been made in health protection of women and children, too.

In our country all the pregnant women are given free medical assistance in childbed, and the working women are granted 77 days of maternity leave without reduction in their wages. They leave their children in the care of the nurseries and kindergartens during the work hours. Our country ranks among the leading countries in the world in respect of the accommodation capacity of the nurseries—573.3 beds per 10,000 of the population.

Our public health services reflect the humanitarian nature of the socialist system under which human life is valued before anything else: medical treatment is available to all free of charge; stress is laid on prophylactic measures; and health services have become a matter of nation-wide concern.

Shortly after liberation the system of free medical treatment was introduced in our country as a measure for promoting people's health. In 1953 general free medical treatment was effected in our country for the first time in Asia, in spite of the

then difficult circumstances in which our country had many tasks to tackle—the tasks of rapidly rehabilitating and developing the war-ravaged national economy and improving the deteriorated people's livelihood.

As a result, our people, who were so poor under the cruel Japanese colonial rule that 95 per cent of them could not afford medicine even when died of disease, have now come to enjoy the benefit of free medical treatment at the expense of the state. They pay not a penny for medical treatment and diet given them in case of hospitalization, not to speak of the medical assistance they receive as out-patients.

Thus our people are now free from such worries as are experienced by people in the capitalist world who cannot consult doctors when ill because they have no money.

With the consolidation and development of the system of free medical assistance, the prophylactic lines are carried through with greater consistency.

Under Japanese imperialist rule the sanitary conditions were appalling in our country, and the disease incidence rate was very high. Various acute infectious diseases were rampant every year, taking a heavy death toll. Even various endemics such as "distomiasis" took lives from thousands of people.

In view of this it was of particular importance to step up the prophylactic work after the liberation. Therefore, the people's government established large numbers of sanitary-anti-epidemic centres, and saw to it that the entire people were inoculated against infectious diseases every year.

Besides, thanks to the powerful nation-wide struggle and various other measures the sanitary and cultural standards in our towns and rural areas have been enhanced, and we are now well on the way to the elimination of various infectious diseases, distomiasis and other endemics. Their attack rate has been considerably reduced.

The production of medicaments has also made rapid progress. In recent years, our pharmaceutists have produced 200-odd new medicaments of high efficacy by using medicinal herbs abundant in our country and by drawing on the rich experiences of **Dongeuihak.*** Among them are "Chungsainggo" and "Mansamgo," both specific cures which heal tuberculous fistulae only in a few months.

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* Eastern medicine, or traditional Korean medicine. For further information, see page 46.

Under the advanced system of public health services and with the living standard rising constantly, our people's health has been remarkably promoted. Compared with 1944, in 1960 the death rate showed a 50 per cent drop and the natural increase of population was 2.7 times. Our people's average span of life has lengthened by 20 years.

Under our advanced health service system an army of medical workers of a new type who devote their all to the promotion of our people's health have been trained.

Their motto is: "Doctors should be more friends of patients than professional doctors and they should possess a real idea of life."

Today the Communist traits of sacrificing everything they have to save men from death are taking shape among our public health workers. There are innumerable moving stories about the lofty deeds performed by them. Here is a story about the staff of the hospital attached to the Heungnam Fertilizer Factory and the students of the Hamheung Medical College. They rescued a boy named Bang Ha Soo who had got third degree burns over 48 per cent of the body. The medical staff of the factory hospital and the students of the college who valued human lives more than anything else transplanted their skins and gave blood transfusions to the boy several times. Thanks to their selfless devotion for several months, the boy was at last rescued from death in spite of his serious burns which the most experienced doctors might have never been able to heal by the ordinary methods of treatment.

One more example: One stormy day Choi Moon Hi, a woman assistant doctor at the clinic of the Jangjin-gang Power Station, received word from the village across the river that there were a woman in hard labour and a serious case of a visible injury in the village. She set out immediately. But she was blocked by the flooding river; the swelling water was threatening to wash away the bridge. But there was no time to lose, there were lives to be saved.

Now she decided to cross the river at all hazards. She tied a rope around her waist and ran across the precarious bridge for all she was worth. And the moment she set foot on the opposite bank, she hurried to the village and fulfilled her duty, thus saving the three lives—the mother and baby and the wounded man.

You will find many heroes distinguished for such noble deeds everywhere in our country.

Our public health workers not only cure the patients of diseases. They are playing a great role as Communist educators of the people in rectifying the patients' old way of thinking and breaking their conventionalities.

Here is a story illustrating this.

There was an orphan named Kim Yong Bai among the pediatric inpatients at the Hamheung Medical College Hospital. He was always in a depressed mood in spite of the tender care taken of him by the medical workers. He did not get better, but remained in a serious condition. Having learned that he was separated from his father and sister during the Korean war and heard nothing of them ever since, that he was thinking of them in the depths of his heart, the medical workers reached the conclusion that it was more necessary to remove his mental trouble than to treat his physical disease.

Thus, the doctors in charge set out for his native village where he had once lived to seek his father and sister of whom they did not even know the names. They went from door to door, from village to village until at last they succeeded in locating them after walking through 200 villages. After seeing his father and sister he had longed for so earnestly, the boy got well very quickly and soon left the hospital.

The love of the people and a high moral sense of responsibility for their lives on the part of our public health workers is bringing about innovations in the development of medical science and skills of treatment, too.

In recent years achievements of epoch-making significance have been attained one after another in our struggle against diseases, making a great contribution to the development of modern medicine.

Especially, the discovery of the substance of Kyungrak by Professor Kim Bong Han, M.D., and his associates marked a turning point in the development of modern biology and medicine.

The discovery of the substance of Kyungrak, a third system of regulation in the human body which provides the theoretical basis for Dongeuihak, has put an end to the incorrect approach to Kyungrak and placed the theory of Dongeuihak on a sound scientific ground.

The immeasurable scientific value and significance of the discovery of the substance of Kyungrak has been fully proved by the rapid progress made in clinical practices, especially in the healing art of acupuncture and cautery, since its discovery.

Already in our country many diseases are cured merely by acupuncture, and it has been confirmed that even stubborn diseases hitherto regarded as incurable can be healed by acupuncture.

Among the great successes attained in recent years by our medical scientists are the active immunization of children from measles and the successful treatment for the after effects of infantile paralysis, successes made possible by drawing on the experiences of Dongeuihak.

Our doctors worked out original methods of operation and prepared new medicaments for the treatment of stubborn maladies. As a result, many cases of the tuberculosis of the spine, one of the inveterate diseases, have already been cured completely.

Blindness is no more a scourge past remedy in our country. Eyesight is restored to the blind who lost it from atrophy of the optic nerve and corneal opacity.

Besides, research into the methods of treatment for various chronic diseases is successfully conducted and excellent results have already been attained.

Numerous rheumatic cases have been cured and definite results have been achieved in the treatment of glaucoma, protracted mental diseases, idiopathic gangrene, liver troubles, stomach and duodenal ulcers.

These innovations and achievements attained in the field of public health services and medicine are closely connected with the consistent policy of the Workers' Party of Korea for establishing **Jooche*** in the public health work.

From the start the Party adhered to the line of inheriting and developing our valuable medical heritages and of closely combining Western medicine and Dongeuihak in the work of public health services and in the research of medical science.

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* By "Jooche" we mean that in carrying out revolution and construction we should creatively apply the general truth of Marxism-Leninism to the specific realities of our own country, and precisely and fully take into account our own historical and actual situation, our own capacity and the traditions, requirements and the level of the consciousness of our own people.

This means that in settling any given problem we should not lean upon any ready-made formula or proposition, but should understand it correctly and precisely on the basis of a scientific analysis of the realities, and then take appropriate measures for it.

Since thousands of years ago the Korean people have had their own traditional medicine and developed it from generation to generation.

Dongeuihak is the sum total of the Korean people's experiences in battle against diseases; it has attained a high level of scientific accuracy and has a unique system of its own theories. That it enjoys full appreciation and trust from the people is because it contains scientific truth in many respects and brings unquestionably good results in clinical practices.

Especially, our experiences accumulated after liberation show that many diseases which modern Western medicine cannot cure are successfully treated by Dongeuihak.

Therefore, our Party and Government have exerted much efforts for the development of Dongeuihak: a number of measures have been taken for the doctors of Dongeuihak to display creative initiative, and consistent guidance has been given for the doctors of Western medicine and Dongeuihak to effect close co-operation between the two schools.

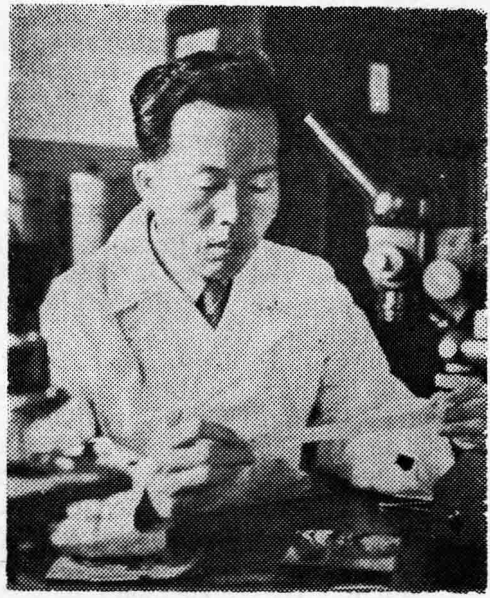
What is more, as the Jooche has been firmly established in the public health services and medical science, dogmatism and mystery have been smashed by the medical workers, and work has been actively conducted to give theoretical elucidations to Dongeuihak by methods of modern science. As a result, our medical workers have broken fresh ground in developing the country's medical science. Their recent successes speak volumes for this.

Having achieved remarkable successes, our public health workers and medical men, like all the workers in other branches of the national economy, now see before them yet brighter prospects of progress for their future work.

During the Seven-Year Plan for Development of the National Economy (1961-1967), the number of doctors will reach 17 for every 10,000 of the population and the system of section doctors taking charge of each district will be introduced to give better medical assistance to the entire population.

By following unswervingly the line of developing Western medicine and Dongeuihak side by side, effective solutions will be found for the outstanding problems of public health and medical science. And many inveterate diseases with a high attack rate will be thoroughly eliminated, and our people will be able to enjoy the happiness of longevity.

GREAT DISCOVERY OF THE SUBSTANCE OF KYUNGRAK



Professor Kim Bong Han

Professor Kim Bong Han, M.D., and his associates in the Kyungrak research group of the Pyongyang Medical College discovered the substance of **Kyungrak,** a third system in living bodies, which had remained so far unknown. The discovery has opened a new avenue to the development of biology and medicine at home and abroad.

Up to now modern biology has accepted the notion of only two regulation systems—the nervous and vascular systems—in living bodies. Accordingly, all physiological changes have been construed only as resulting from the changes taking place in the two systems. Clinical practice, too, has been based on the above-mentioned theory.

But the basic theories of modern biology and medicine have been unable to solve many problems arising in prevention and cure of diseases.

There are many cases of patients suffering from diseases regarded as incurable by modern Western medicine, being successfully remedied today by Dongeuihak.

Not a few scholars, however, regarding the theory of

Dongeuihak as mere accumulations of therapeutic experiences, have maintained that the theory was a hypothesis suggested by ancient scholars and so it was unscientific. Some even attempted to adjust the theory to that of Western medicine.

Professor Kim Bong Han and his research group thought it was neccessary to dispel such misconception. Regarding Dongeuihak with its long tradition as a science with a perfect theoretical system, they concluded that by developing it in combination with modern medicine a new sphere could be explored to remedy the deficiencies in modern biology and medicine.

It was from this point of view that they had set about their research work on the Kyungrak system, the core of the theories of Dongeuihak. In doing so, they kept to the standpoint of Jooche with all firmness.

Boldly overstepping the limit of the accepted conception of modern biology, they carried on electro-biological experiments, observation of actual objects with the unaided eye and various other research work in a creative way. At last they established that there is a third regulation system in living bodies, that is, the Kyungrak system so far known only in the theory of Dongeuihak. They gave scientific explanations on the structure, form and functions of Kyungrak.

Results of Professor Kim Bong Han's study on the substance of Kyungrak were described in detail in his two treatises, "Electric Changes in Kyunghyul" (December 1960) and "A Study on the Substance of Kyungrak" (August 1961).

In his treatises a scientific exposition was given on the presence of certain influence gradually conveyed along Kyungmaik (a vas) when a stimulus was given to **Kyunghyul** (a spot for acupuncture treatment) in the Kyungrak system existing in the human body independent of the nervous and blood-vessel systems. Further, it was proved that a stimulus given to the Kyungrak system produced a different effect from that on the nervous system, and that the process of the spread of the effect coincided with the distribution of Kyunghyul as indicated in Dongeuihak, different from the distribution of nerves and blood-vessels. Moreover, it was established that the spots with such characteristics were fixed and stationary. Their distribution coincided as a whole with the Kyunghyul distribution outlined in *Dongeui Bogam* written by Huh Joon, a great medical scientist of our country. He also found that there existed some additional spots in other regions from those already known. He proved that one Kyunghyul is connected with an-

other or with internal organs of the human body by the medium of **Kyungmaik.** The substance of Kyungmaik which keeps connection between them constitutes quite a different regulation system from the nervous and blood-vessel systems.

Some Western medical scientists had been of the opinion that the effectiveness of acupuncture in the Kyungrak system should be explained from the action of nerves. But the error of their view was proved by Professor Kim Bong Han who showed that even though the nerves were cut off it caused no trouble in the working of the Kyungrak system.

Firmly based on the theory of dialectical materialism on the unity of functions and forms of the living organism, he continued with his research work to elucidate the substance of Kyungrak.

As for the substance of Kyungrak, many scholars had denied its existence and regarded all phenomena, which in the classics of Dongeuihak were explained on the theory of Kyungrak, merely as neuro-reflective ones or as simple processes taking place through neuro-humoral connections. Accordingly, they not only failed to find a reasonable explanation of the mechanism of acupuncture, but also argued that the regions of Kyunghyul were such spots as were only slightly different from other spots in respect of the distribution of nerves and blood-vessels.

The results of the experiments carried out by Professor Kim Bong Han and his research group testified to the existence of the Kyungrak system, refuting all the arguments against it; and the existence of the structural parts of the Kyungrak system was established and their morphological characteristics were made known.

Kyunghyul is found beneath the epidermis or in other tissues. It is a small and elliptical, tender structure and clearly differs from the adjacent tissues. (See Fig. 1.) This structure is surrounded by many blood capillaries. All Kyunghyul differ from each other in their sizes and forms. Some Kyunghyul are found to be an assembly of a few structures.

Kyungmaik consists of bunches of tubular structures, (See Figs. 2, 3, 4.) and the cross-section of this tubular structure is round or oval. The diametre of the tubular structure of Kyungmaik ranges from 20 to 50 microns, with walls made up of a very thin membrane. The content of Kyungmaik is colourless and transparent, nor does it contain any bloodcells or other concrete elements.

Each tubular structure of Kyungmaik is covered with con-

nected tissues and Kyungmaik itself is also surrounded with connected tissues. The tubular structure of Kyungmaik branches off from Kyungmaik to form Kyunghyul.

Each Kyunghyul is linked with several tubular structures of Kyungmaik, and the thickness of a tubular structure of Kyungmaik is almost the same all along the structure's entire length.

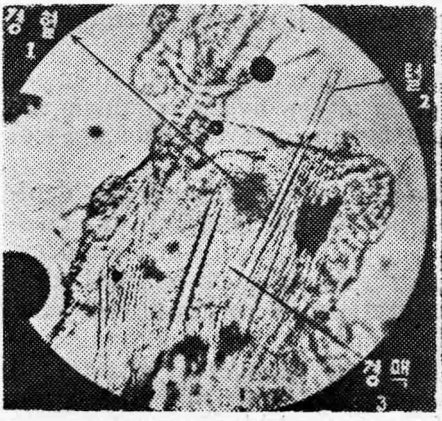


Fig. 1. Kyunghyul and Kyungmaik connected with Kyunghyul. 1. Kyunghyul 2. Hair 3. Kyungmaik

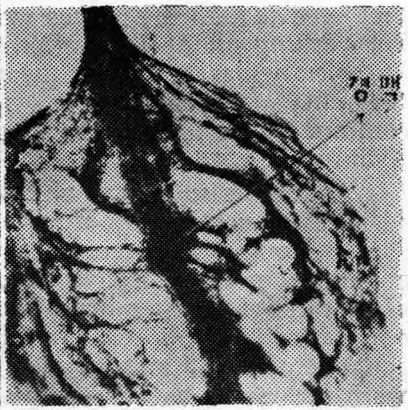


Fig. 2. Kyungmaik

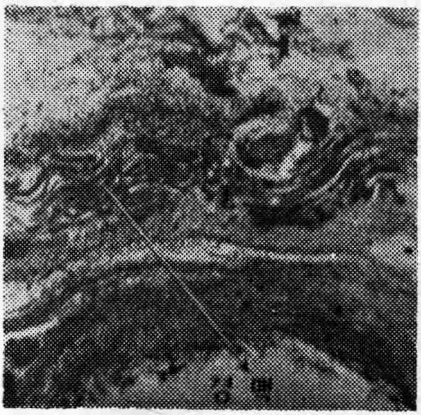


Fig. 3. Forms of Kyungmaik (slightly magnified)

Fig. 4. Forms of Kyungmaik (magnified)

Kyungmaik is soft but the content compact. It is accompanied by blood-vessels, and capillaries are very densely distributed there than in other tissues.

No Schwann's cell is found in the tubular structures of Kyungmaik and their diametre is in general larger than the axon of the nerve. Their morphological nature differs from that of the nerve.

This tubular structure is also different from the lymphatic vessels in the pattern of distribution and in the histological nature, and does not enter the regional lymph node, and no lymphocyte is to be seen within the tubular structures either in the proximal or distal part of the regional lymph node.

It has thus been established through histological and experimental-biological research that Kyungmaik clearly differs from nerves, blood-vessels and other qualities.

The electro-biological features of Kyunghyul are the same as indicated in the electrogram of Kyunghyul induced on the surface of the skin. The action of internal organs is reflected in Kyunghyul and the stimulus given to Kyunghyul exercises influence on the functioning of the internal organs. (See Fig. 5.)

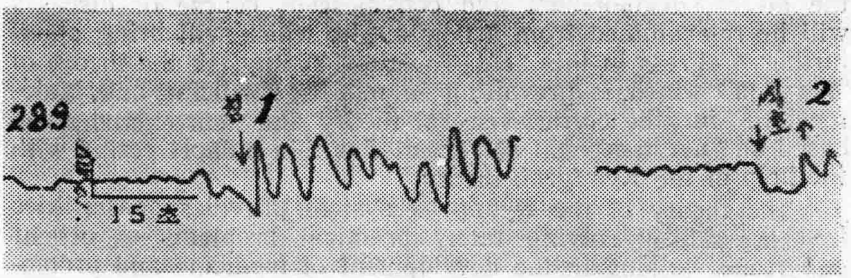


Fig. 5. Picture of Kyungrak electricity induced from a Kyunghyul on the Kyungmaik of a leg when another Kyunghyul of the same Kyungmaik is stimulated by a needle (1) or by a solution of 3% vinegar (2)

At the same time the stimulus given to one Kyunghyul on a Kyungmaik exerts influence on other Kyunghyul on the same Kyungmaik.

Professor Kim Bong Han proved that no similar electro-biological and functional features as in Kyunghyul are noted in the tissues around Kyunghyul. When a stimulus is given to the Kyunghyul connected with the movement of the colons in living bodies, the movement of the colons is strengthened markedly, but when the surrounding tissues are stimulated such pheno-

menon does not occur. When Kyungmaik is cut, the function of conveying the effect of stimulation from Kyunghyul to the colons is interrupted.

Dr. Kim Bong Han recorded the results as stated briefly above of his studies on the substance of Kyungrak in his treatise, "A Study on the Substance of Kyungrak."

Thus he demonstrated the existence of Kyungrak, a system so far unknown in modern biology. This is indeed a great discovery in modern biology and medicine.

It has put the Kyungrak theory of Dongeuihak with a long history on a firm scientific and material basis. Moreover, it has made it possible to inherit and develop not only the theory of Kyungrak but also the other spheres of Dongeuihak connected with it on the firm basis of modern science. At the same time, the theory on the substance of Kyungrak makes it possible to re-examine the hitherto universally-recognized theoretical system and practice of modern biology and medicine and to shed a new light on them.

For example, metabolism and all other vital phenomena, correlations between the surroundings and the living organism, the attack, development and convalescent course of diseases will be re-examined from a new angle, which will bring about further progress in this field. The shortcomings in the theory of "nervism" which is prevailing in modern medicine and biology, and in the cortico-visceral theory and neuro-humoralism based on "nervism" will be remedied within a short period with the help of the Kyungrak theory.

The theory of the Kyungrak system provides possibilities for successfully solving many practical problems of urgent importance arising in the development of medicine and promotion of health for mankind. New preventive and therapeutic methods against gastric and duodenal ulcers, essential hypertension, infectious diseases and various other diseases with a high rate of incidence, as well as scientific methods of extending the human life span will be established on the basis of the Kyungrak theory.

This great achievement which has demonstrated the exceptional creative spirit of the Korean people to the whole world, has given a solution to one of the most fundamental problems in biology and medicine, thereby making a great contribution to the development of science in our time.

NO MORE MEASLES

Until quite recently, modern medical science has been unable to find an infallible remedy for measles. Medical scientists in all countries have been concerned with it, and worked energetically for finding a method of prevention against it. Their research work, however, has been unable to yield any results worth mentioning. In our country, however, a great progress has been made in the prevention of measles in recent years. There was an old folk remedy for its prevention: A baby, it was said from olden times, would become immune from measles if he was brought into contact with a patient suffering from it within 100 days after his birth.

In the past, however, no serious attention was paid to this fact.

In the course of carrying out the policy of the Workers' Party of Korea for inheriting and developing Dongeuihak and folk remedies, our scientists and public health workers came to pay serious attention to the popular method of prevention of measles. In this, they had been deeply inspired by the Party's great concern for the promotion of public health.

Kang Joon applied the afore-mentioned method to his children from 1953, on a trial basis. On the other hand, Joo Dong Chil and An Shik proved that an infant becomes immunized for a long time if he is brought into contact with a measles patient while under three months old. By way of experiment, they had chosen the babies under three months of those public health workers who were working at the measles wards of hospitals or daily nurseries, and brought them into direct contact with measles patients several times. And those babies remained immune for a long period.

It is a common knowledge that in many countries various methods have been applied to prevent the measles--inoculation, vaccination under the protection of passive immunization, vaccination of measles virus (active immunization), etc.

In the 18th century, Home of Sweden injected the blood taken

from measles patients in the eruption period under the skin of unaffected infants and succeeded in lessening the suffering of the patients (morbillisation). But there were cases in which some infants suffered seriously owing to the vaccination and others who were vaccinated spread the disease.

Though the research work continued in the 19th century, the above-mentioned shortcomings prevented the application of the method.

In 1915 Herrmann of Germany applied the measles vaccination to 40 babies within four to five months after their birth, during which they still retained the power of resistance to the measles, a power inherited from their mothers. His method, too, had the same defects as Home's. On the other hand, Degkwitz of Germany made a research into the method of immunization to give babies in incubation period temporary immunity from the measles by means of injecting into them the serum of persons who had had measles (passive immunization). In the course of his experiments, he learnt that in some cases sufficient anti-measles vaccine, when injected into a baby in the fourth day of incubation period, prevented the attack of the measles for a relatively long period. And he also discovered that not infrequently the disease was prevented for life when such method of passive immunity was applied once again within three or four months after the first application of the method (active immunization). But this method had a number of shortcomings, too. So it was not introduced in the prevention of the measles.

Later, various other methods—injection of the blood of the grown-ups, serum or gamma globulin—were tried in many countries, but no success was recorded in gaining active immunity.

In 1911 it was established by Anderson and others that the measles was one of virus diseases. After that vaccination came to the fore as a method of gaining active immunity. Great attention was directed to the production of a vaccine made of living bacteria which has a weak virulence but can confer immunity. At present such studies are energetically made in various countries.

However, vaccines made of living bacteria not only cause so-called vaccinal measles resembling natural measles, but give no great immunity.

Up to now no success has been achieved in the prevention of the measles in any country of the world.

Research has been made in a certain degree to secure active immunity for infants under three months.

In 1925 Keer, a British physician, discovered that two babies under three months put in contact frequently, closely and for a long time with measles patients, remained unaffected by the disease even long afterwards although there had been many occasions for them to catch the disease. Ueyama and Wada of Japan tried to infect twelve infants with measles by means of natural contact while the babies still retained sufficient passive immunity obtained from their mothers, and found that out of the twelve infants nine did not contract the measles for a long period. But, later, the Japanese turned to the application of the method of injecting gamma globulin into older children while bringing them into contact with measles patients.

As to the question of an infant under three months gaining active immunity against the measles, it is argued in the medical world that complete immunity is impossible and that the immunity obtained is not durable. And some immunologists are of opinion that when an infant under three months is affected by the measles it may suffer seriously, and may possibly die of it. They have failed to apply vaccination boldly to babies of three months and downward, for they believe that the younger the affected infant, the worse the progress of the disease.

To sum up, there have been affirmative cases in some countries of active immunity applied to infants under three months, though some medical scientists gave up the method after several applications. But the overwhelming majority is against it.

In our country, however, thanks to the efforts of Kang Joon, Joo Dong Chil and An Shik and to the strenuous research work

Research workers: Kang Joon, Joo Dong Chil and An Shik (from left to right). They have worked out a new method of active immunization to prevent infants under three months from measles

carried on by the research group for active immunization against the measles, quite a few problems have been solved in the active immunization from the measles of infants under three months. Thus, a new leaf has been turned over in this domain.

Here is a brief review of the achievements attained by the research group.

The researchers applied the active immunization method to more than 18,000 infants under three months. Some of them did not catch the measles even though they were brought into contact with measles patients on several occasions after the application of active immunization. Although the power of resistance to the measles differed to some extent according to the methods and number of immunization, 81.7 per cent of them became immune from the measles. This is less than one twentieth of the attack rate of the babies to whom active immunization has not been applied.

It is expected that further improvement of the methods of and materials for immunization as well as increase in its number will produce better results in the research work.

The results achieved in our country are far better than those in foreign countries.

Our research group for active immunization against the measles applied active immunization to infants under three months and observed the resultant symptoms. There were only slight fever, catarrh and lesion in cerebral nerves. The research group confirmed that the babies showed symptoms resembling those of measles patients, but none of them became an infectious source.

Our researchers are now making further progress in their research into this problem. It must be noted in this connection that very short was the incubation period of the affected infants among those who underwent active immunization within three months after their birth; it was less than six days for 56.3 per cent of the affected babies; there was hardly any case of the period exceeding two weeks.

The symptoms resembling those of the measles (reaction) could be observed in 60-80 per cent of the vaccinated infants under three months. Though there was such reaction, only a few of those infants suffered again from the measles. Accordingly, it could hardly be said that complete active immunity was obtained once symptoms resembling those of the measles appeared. The higher the value of antibody and of counteractoring

antibody formed by the immunity is, the fewer the cases of being attacked by the disease are. The method of active immunization against the measles applied by the research group to infants of three months and downwards, is attended by no danger, it causes only very slight fever and produces no ill effects to be mentioned. The method confers a high degree of immunity; it confers a stronger immunity than those applied in foreign countries.

At present this method finds a universal application in our country, remarkably lessening the rate of attacks and infant mortality from the measles.

NEW SUCCESS IN THE CURE OF THE AFTER EFFECTS OF INFANTILE PARALYSIS

Infantile paralysis or acute anterior poliomyelitis is an infectious disease which attacks children under seven or eight years old. Paralysis comes from the destruction of cells of the anterior cornua of the spinal cord, the function of which is to regulate the movements of limbs.

Poliomyelitis is widespread throughout the world. When the disease is rampant, it threatens the lives of many children. When the acute stage of the disease passes, it leaves the sufferer with various after effects, thus making a cripple of him for life.

Since the middle of the 19th century scientists of many countries have made researches into the disease which brings intolerable pains and misfortunes to people. In 1908 it was proved that the disease is caused by filter-passing viruses.

In recent years, a vaccine against the disease has been invented and a definite success achieved in its cure.

But the after effects of poliomyelitis have been known as incurable until recently. Particularly, the case of more than two years old has been regarded as almost past remedy. But in our country, the synthetic therapeutics including the hitherto accepted methods of physiotherapies, curative gymnastics, medications and orthopaedics have been applied. These methods of treatment were applied in combination with the cures of Dongeuihak with its long traditions. This has brought about an epoch-making results in healing the after effects of poliomyelitis.

From ancient times our forefathers used acupuncture in treating the functional disorders of polio patients, and achieved good results. This proves the great importance of the Kyungrak system in restoring the paralyzed functions.

Recently, a medical research group of our country has succeeded in making a specific liquid medicament, "Swallow No. 61," which acts directly upon the Kyungrak system. This

medicament is highly effective in healing the after effects of the poliomyelitis.

The research group applied the medicament to 127 patients suffering from the after effects, of which 105 had case histories of more than two years after the acute period and were regarded as almost past remedy. But the newly invented medicament produced a noticeable effect on 119 of the 127 patients, to which the medicament was applied to a definite region of Kyunghyul. Especially to 76 the medicament worked wonders. But the course of recovery differed from each other as the affected parts of the patients and their degrees of paralysis were different.

Of eighteen patients who had lost the use of both legs, eight were enabled to stand up and another eight were able to walk about. Twelve of the seventeen patients who had been unable to walk by themselves became able to walk without others' help. Of 87 lame children, 35 did not limp but 46 still limped slightly.

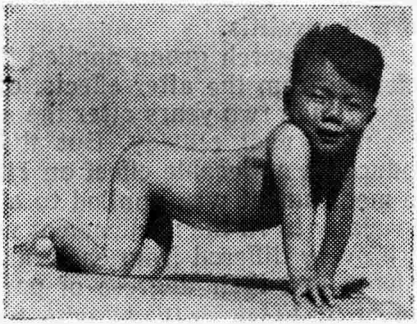
Of five patients who lost the use of both arms, two could raise and move their right hand freely. It was observed on most of these patients that the circulation of the blood became quicker, the muscles grew stronger, energies greater and the movements of the joints freer.

On the electro-myograms of the patients, it could be observed that the amplitude of bio-electrical wave on the muscles which were recovering strength grew wider and the frequency of the wave quickened. This improvement could also be observed after the treatment or the application of acupuncture.

Six-year-old boy Kwon Sung Joon went through the acute stage in August 1959. He received 40 days of treatment in isolation. After that, various physical and medicinal treatments were applied to him but failed to produce effect. Though two and a half years had elapsed since the acute stage, he could not gain his feet owing to serious paralysis in his legs.

The research group undertook his treatment in May 1962. After receiving six times of acupuncture treatment by means of a syringe he could walk some ten metres. Ten times of treatment enabled him to walk some 30 metres. After 13 times of treatment he was given no further therapy for two months, but he showed continued progress towards recovery. Then the treatment entered the second course. When three times of treatment were over, the boy was able to walk 300 metres. Upon the completion of treatment he could walk freely.

Thus the new therapeutics opened up the possibility of re-



Kwon Sung Joon, a six-year-old boy who had suffered from serious paralysis in his legs after going through the acute period of poliomyelitis, began to stand up and walk after the acupuncture treatment by means of syringing "Swallow No. 61"

covery for the crippled children.

This has refuted the opinion that it is almost impossible to cure the after effects of poliomyelitis after one to two years following the acute stage of the disease. It has been proved that even four to five years or more after the acute stage, acupuncture treatment by means of syringing the above-mentioned medicament into the Kyungrak system can bring much improvement to the patients.

Kim Jung Hi, a girl of 23, went through the acute stage of poliomyelitis 15 years ago. Her father, a doctor, did all he could to cure her, but her right leg remained paralyzed, its atrophy grew worse. She had to walk on crutches.

In April 1962 the medical research group mentioned above began treating her, and after two courses of acupuncture treatment by means of syringing the said medicament into the Kyungrak system it became unnecessary for the girl to use crutches or correction appliances. To walk freely she only needed a stick.

The course of recovery from the after effects of poliomyelitis cannot be properly explained merely by the hitherto accumu-

lated knowledge of modern medicine. The Kyungrak system which was discovered long ago by our ancestors plays a big role in the recovery from the disease.

On the basis of the initial successes in the development of Dongeuihak, the medical workers of Korea will accomplish still greater successes in the treatment of the after effects of poliomyelitis and will make a new contribution to the development of medicine in the world, by further elaborating the theories of Kyungrak and other branches of Dongeuihak.

NEW RESULTS IN RESTORING LOST EYESIGHT

At the National Conference of Front-rankers of Chullima Workteams held in August 1960, Premier Kim Il Sung instructed earnestly the eye doctors of the country to give light to all the sightless persons.

Acting upon his instructions, our eye doctors made house-to-house visits to the blind men in every corner of the country, registering them and making etiological studies. This lasted for one year.

According to the materials obtained in the course of the investigations, the blindness was etiologically caused above all by such diseases as softening of the cornea from malnutrition under Japanese imperialist colonial rule, pyorrhoeal eye disease caused by epidemics and tubercular eye diseases.

As other etiological causes there are atrophy of the optic nerve, glaucoma, the ulcer of the cornea, cataract, trauma, etc.

In our country today, where people are free from all worries about housing, food and clothing thanks to the correct, popular policy of the Government, there is no one losing his eyesight owing to malnutrition, epidemics, etc.

The point now is how to cure those people who were blinded already in pre-liberation days.

At present free medical assistance is given in a planned way to thousands of the blind persons whom our eye doctors registered during the nation-wide survey.

For long years, many eye specialists of the world have made much efforts to find out a positive remedy for atrophy of the optic nerve, but with little effect.

Our eye doctors, too, applied various therapeutics indicated in the documents of modern medicine, but could not accomplish satisfactory results. They did not shrink back, though, in front of difficulties. They tirelessly continued with their research work to break new ground.

They came to pay attention to the methods of Dongeuihak, with the help of which they decided to carry on the research work.

One day an ex-serviceman came to a hospital. He had lost

eyesight owing to atrophy of the optic nerve in the war time. The eye doctors of the hospital received him and treated the patient by modern medical therapeutics for several months, but they achieved no results worth mentioning. Now, they set about applying the healing art of acupuncture. They gained confidence in this from the great discovery of the substance of Kyungrak by Professor Kim Bong Han.

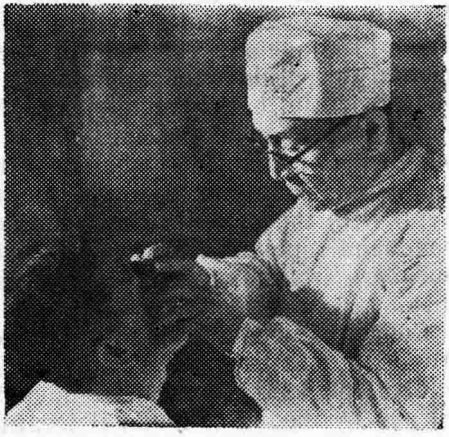
A definite progress was made in the treatment of atrophy of the optic nerve as a result of the application of acupuncture.

Though the acupuncture produced not very great efficiency, it was confirmed that it exercised a definite effect on the recovery of eyesight of the patient suffering from atrophy of the optic nerve. What if some medicament be injected into Kyunghyul? they thought. It might be possible to produce good effect if the medicament excited *Ki* (vitality) of Kyungrak.

They went on to study scores of books on Dongeuihak including *Dongeui Bogam* to determine what medicament could be most effective. They chose such one as could excite the Ki of the Kyungrak. The medicament, however, had so far been only for internal use. How could it be adapted for injection was a hard nut to crack. It was necessary to conduct very complicated, pharmaceutical and pharma-chemical experiments on the medicament including tests of its effective concentration, pharmaceutical action, and poisonous effect before it was applied in the treatment of diseases.

After many experiments the compositions, effective concentration and action of the medicament were determined. The test of its poisonous effect on animals, too, was successfully carried out. Thus they prepared a liquid medicament, "Light No. 11," most efficient to heal atrophy of the optic nerve. At first "Light No. 11" was injected into several Kyunghyul, spots where acupuncture had been applied. But no expected results were produced. This

Acupuncture treatment by means of syringing "Light No. 11" to a blindman caused by atrophy of the optic nerve



failure, however, could not shake the doctors' courage.

The ceaseless efforts of the eye doctors finally brought about success. They found out where to inject "Light No. 11" to remedy slight atrophy and inflammation of the optic nerve. Thus the main Kyunghyul and an accessory Kyunghyul were located. When the new medicament was injected into the two Kyunghyul simultaneously, the effect was superior to that in the case of other Kyunghyul. It proved decisive superiority over the conventional treatment. It also shortened the time of healing considerably.

After two weeks' application of the new therapeutics the afore-mentioned ex-serviceman recovered his sight.

To give an explanation as to how the recovery of sight was possible, the eye doctors made various clinical examinations and conducted experiments on electric retinal wave, the excitability of optic conductor, electric brain wave and so on.

Those examinations and experiments led to the elucidation of how atrophy of the optic nerve could be healed.

Good results were also obtained in deciding diseases for which the acupuncture treatment by means of syringing a liquid medicament was efficacious. Not only that, revealing light was thrown on some new aspects of pathological research into the causes of atrophy of the optic nerve.

Thus the new method of treatment which was elaborated in the course of inheriting and developing Dongeuihak enabled our doctors to heal the blindness caused by atrophy of the optic nerve. At the same time glaucoma, one of the main causes of blindness in our country, became curable by the new remedy. It is true good results were achieved in the past in the treatment of glaucoma through the application of various medicaments, operation and acupuncture.

Recently, better results have been obtained in our country in the treatment of the hardening of eyeball from high pressure, which was promptly remedied by the acupuncture treatment by means of syringing a liquid medicament into several Kyunghyul, with the result that the eyes could see better and the headache removed. Thus it has been proved that the new acupuncture treatment is much superior to all conventional remedies.

Leucoma accounts for the largest percentage of blindness. Medical scientists of various countries have made constant efforts for long years to remove the white punctum from the cornea by means of medical treatment or operation. And consi-

derable successes have been achieved in the treatment of leucoma by cornea grafting. But this method cannot prevent the recurrence after the first operation.

In our country, too, great results have been registered in experimental and therapeutical homogeneous and heterogeneous graftings, with the result that the recurrence of leucoma is successfully prevented after the first cornea grafting, which has put an end to the blindness caused by leucoma.

Blindness caused by trauma, too, is curable in our country.

The method of X-ray examination of the alien substance in the eyeball has been perfected, while the method of extracting it has been further improved. Pieces of iron and the like can be extracted one hundred per cent, and great progress has also been made in extracting copper, brass, stone, and other alien substances which are not attracted by a magnet.

More rational, compound therapies combined with remedies of Dongeuihak have been elaborated on the basis of the new results of the etiological research into the bruise on the eye to heal the rupture of the sclera under the conjunctiva, haemorrhage of the retina, abrasion of the retina, serious nystagmus, opacity of the vitreous body, paralytic strabismus and so on. Persons suffering from such eye troubles are being successfully cured and their eyesights are restored.

With the perfection of the timely cutis and mucosa grafting technique for healing the burn on the eyeball and of the therapeutics for serious burn in the eyeball based on Dongeuihak, blindness caused by the burn on the eyeball has now become completely curable.

HUNCHBACK STRAIGHTENED

There is a Korean saying that a hunchback can straighten himself only in the other world. So far the hunchback is known as an incurable disease and the world has found no remedy for it.

This disease is called spinal tuberculosis, vertebra caries, or Pott's disease.

The vertebra affected by tuberculous bacilli decays bit by bit and crumbles at last. The patient thus becomes crookbacked.

The tuberculous pus formed inside the vertebra oozes through the flesh and finally finds its way out to the surface of the skin, leaving a fistula. This fistula is hardly curable and when brought into contact with pyogenic bacteria, causes sepsis of which the sufferer dies.

Therefore, Calot called the fistula a "gate to death."

This disease causes paraplegia because of the pressure on the spinal cord. Consequently, the patient has troubles with urination and passage. In the end, he falls into a critical condition and dies.

It is now nearly 200 years since Mr. Pott proved that this disease is of tuberculosis. Since then many medical scientists have applied various therapeutics.

In the late 19th century Treves, Fontan, Beckel, Keher, Podrez, Vincent, Menard, Eiden Heine, and Israel performed spinal surgeries of opening the abscess, of clearing away the pus and raking out the decayed portion of the vertebra.

Their necrotomy was unable to straighten the hunchback; it did not go beyond the curing of spinal tuberculosis. The death rate was so high (most of those who underwent operations died) that surgeons of many countries gave up their operating knives.

With the turn of the 20th century Albee, Hibbs, Vreden, Halsteadt, Henle and other medical scientists applied spondylodesis without performing operations on the seat of vertebra caries.

The very spondylodesis not only failed to straighten the hunchback, but proved unsatisfactory to heal spinal tuberculosis.

In recent years streptomycin, hydracid, P.A.S., etc. were invented. These injections proved to be very effective in the treat-

ment of spinal tuberculosis. But these medicines, too, have failed to straighten the hunchback.

Only it is recorded in foreign medical literature that crooked backs caused by spondylarthritis anchylotica (this is a rare disease) were straightened. This is, of course, not tuberculous caries.

Many medical scientists thought that it was impossible to correct the vertebrae decaying from tuberculosis and straighten the hunchback caused by T.B. for fear of injuring the spine in the course of operation.

However, the Korean medical scientists give an affirmative reply to the question of curing the hunchback.

A group of surgeons headed by chief surgeon Kim Myung Joon, Labour Hero, scored signal success in straightening the hunchback for the first time in the world.

For many years the chief surgeon has been engaged in treating spinal tuberculosis. Every time he saw unhappy people with crooked backs he thought: "Should a hunchback remain deformed for ever? Is there no other way but to leave spinal caries as an incurable disease? Then, what is the use of a doctor? People say I am a qualified surgeon. Is that really so? The Party always tells me to think and act boldly."

Before, it was believed that if the patient was affected by tuberculous bacilli or pyogenic bacteria, plastic operation could not be performed. But Kim Myung Joon was convinced from his long clinical experiences that orthopaedic treatment could be successfully applied to T.B. cases just as the correction of healthy bones and the grafting of bones could be successful. Hence, he boldly set about surgical operation to straighten the hunchback.

At first he carried out the necrotomy of the vertebrae and grafting of spongy bones. By this method of operation the tuberculous abscess and the rotten bones around the vertebrae are removed and then pieces of spongy bones are grafted into the hollow thus formed in the vertebrae. After the operation streptomycin and penicillin are continually injected through long injection needles thrust into the affected region. This method is far superior to the method of grafting bone compact applied in some foreign countries: the convalescence is shorter and the results are better.

The results are: Out of 230 cases of operation, 89.2 per cent were completely healed, 8.2 per cent had good effect, 1.3 per cent remained the same, and 1.3 per cent died. (Well-known Japanese

surgeons, Yamada and Kondo, applied necrotomy to 48 cases of spinal tuberculosis. The results were: 52 per cent completely recovered, 43.8 per cent turning better, 2.1 per cent remaining the same, and 2.1 per cent died.)

On the basis of these results, Kim Myung Joon then went over to the surgical operation of straightening the hunchback.

In contriving his new surgical method, he thought hard as to how to keep the spinal cord untouched during the operation and fix the vertebrae so that the spinal cord might not be impaired for a certain period after the operation.

He got a hint from the carpenter's work. When the carpenter straightens a crooked pillar he saws the crooked inside of the pillar to a certain extent and then cuts out its outside wedgewise. After straightening the pillar he drives a wedge into the space formed on the crooked inside. In this way the carpenter makes a crooked pillar erect.

Chief surgeon Kim Myung Joon who, for many years, studied whether it would be possible to straighten the crooked back by applying the carpenter's principle at last took up the knife.

In the first place he cleaned away the tuberculous pus formed around the vertebrae, removed the decayed bone, then scratched off the surface of the affected part until sound bone appeared from beneath. Then he cut out wedgewise the protruding part of the vertebrae, and straightened the crooked back by degrees.

After that, he plugged pieces of spongy bones into the hollow which had been the seat of the disease, and fixed the spinous processes. In order to prevent the vertebrae from moving after the operation a gyps bed was applied.

This method of necrotomy and of correcting kyphosis was invented and applied for the first time by chief surgeon Kim Myung Joon.

As is proved now, the hunchback can be straightened by applying this surgical method.

Bai Bo Boo, a woman of 32, who had become a hunchback from spinal tuberculosis, was hospitalised in 1960. She also had paraplegia and became unable to move even a toe. She was incontinent of urination and had great trouble with passage.

X-ray photographs showed that her three backbones were totally decayed and crumbling down. She was nearly a right-angled hunchback.

The necrotomy and correction of kyphosis performed by chief surgeon Kim Myung Joon proved effective and the woman's

crooked back was straightened soon. Three days after the operation she was able to move her toes and on the fourth day she had the sense of urination. Her paralysis was cured gradually and she became able to move her legs. After one year, her vertebrae became fast. Soon the woman was able to sit for hours. After one and a half years she could walk by herself.

Besides Bai Bo Boo, 30 more people with crooked backs received treatment from Kim Myung Joon who applied different methods in correcting their kyphosis with success.

The hunchback known as an incurable disease for thousands of years and given no attention at all by the contemporary medical science, has been proved fully curable by the Korean surgeons for the first time in the world, and this involving not the least danger to human life.

The surgeons' group led by Kim Myung Joon has achieved remarkable successes in the treatment of paraplegia, the most malignant complication of tuberculosis of the spine. It is hard to cure paraplegia caused by spinal tuberculosis; nearly 15-20 per cent of the patients are impossible of recovery and 14 per cent are doomed. Neither conventional nor surgical treatment is effective to cure those who have been suffering from paraplegia for more than two years.

With an eye to curing the advanced case of paraplegia, the

Bai Bo Boo, a right-angled hunchback, has her crooked back straightened after the necrotomy and spondylodesis. Photo (left) shows her backbone before the operation

Kim Myung Joon surgical group cut out arcus vertebrae and posterior part of the body of the vertebra, and separated spinal membranes which adhered together. Then they hollowed out a groove in the back of the body of the vertebra to serve as a new spinal canal so that the pressure and strain of the spinal cord may be lessened. In this way, they succeeded in curing patients who had been suffering from paraplegia for 5 to 11 years.

Besides, they successfully carried out the operation of taking off the vertebra as a whole or of simultaneously cutting out both the vertebra and the lateral part of the vertebra, to cure the paraplegia.

Kim Myung Joon and his colleagues were successful in treating fistula, too.

It is difficult to cut away the fistula by means of operation or cure it with medicine. Often, it is subject to recurrence. Worse still, the fistula discharges pus for 10-20 years or more than 30 years.

The surgeons' group used a specific, "Chungsainggo" plaster, which they themselves prepared after making pharmaceutical and pharma-chemical experiments on medicinal substances selected by using method of Dongeuihak. By applying this plaster, they cured 300 out of 450 cases with fistula including patients suffering from it for 35 years.

To cure the rest, it was necessary to perform surgical operations while applying "Chungsainggo."

On the basis of the experiences gained in the treatment of the hunchback (with the cupola below the thoracicolumbar vertebrae), Kim Myung Joon is now making studies of the possibilities for curing the hunchback coupled with projection forwards of sternum.

BRAIN DISEASES CONQUERED

The treatment of the diseases affecting the brain or other nervous systems is very complicated and difficult.

Modern medical scientists are encountering a great deal of difficulties in the cure of brain diseases, because it is extremely difficult for them to make accurate diagnosis of and find adequate remedies for encephaloma, cerebral abscess, epilepsy, involuntary movement and various other cerebral diseases.

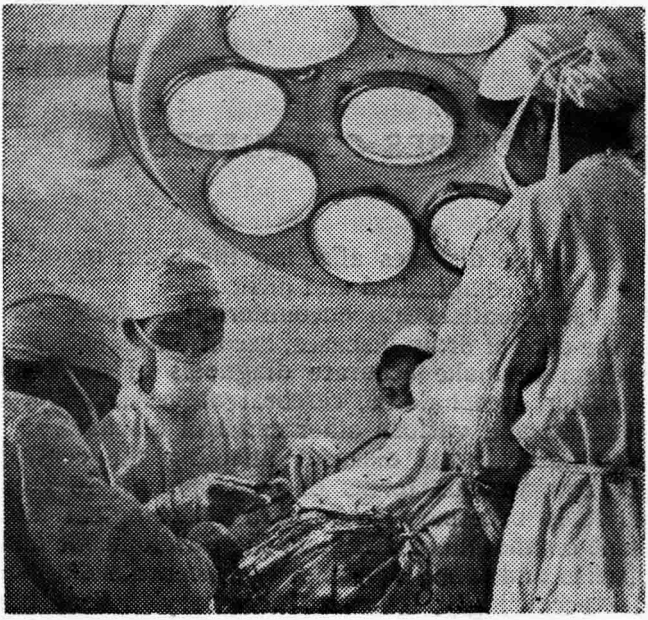
This is quite natural: the diseases affecting the central nervous system show various forms of development; to cure them, therefore, it is necessary to form a neurological and scientific judgment on the affected region, the development and nature of the disease and make a prompt and accurate diagnosis of the disease accordingly; it is also necessary to have the latest medical equipment, skilful and intricate surgery, and good medicaments.

Our country under Japanese imperialist rule had not a single neuro-surgeon nor hospital specialising in brain diseases. Hence the mortality of cerebral neurotics, who could not receive due treatment, was very high. However, we have now many neuro-surgeons and special hospitals in our country, all equipped with such up-to-date medical instruments as electro-encephalograph, radioisotope and others.

In our country pneumo-encephalography, arterial encephalography, opaque radiography of the ventricle system are in wide use for the accurate diagnosis of the diseases of the cerebral nervous system. And it is only after a scientific conclusion drawn on the basis of the comprehensive diagnosis with the help of these latest medical equipment that brain surgery is conducted in accordance with the indication of the disease.

Encephaloma and involuntary movement have been regarded as incurable. Unless surgical operation is conducted, most of the patients are to meet their death or become invalid.

Experience in many countries today shows that the disease takes a very high toll of lives even after the operation.



Brain surgery at the South Pyungan Provincial Hospital

However, great success has been achieved in this field by our scientists.

The neuro-surgical section led by Labour Hero Bak Chun Ho of the South Pyungan Provincial Hospital conducted with success surgical operations on nearly 750 cases of encephaloma and cerebral abscess.

Here are some examples.

Li Sung Dai (52), a worker in Pyongyang, suddenly fell unconscious and critical after continued headache for 4-5 days. The result of diagnosis revealed that the case was cerebral abscess. Then the members of this surgical section performed an emergency operation and succeeded in removing two fist-sized abscesses formed long before in the brain.

The same was the case with Hyun Soon Chul (56), a peasant living in Kiljoo County, North Hamgyung Province. At first they could not get to the bottom of the disease even with the help of pneumo-encephalography and arterial encephalography as the case was in its primary stage. Then electro-encephalograph and radioisotope were used to diagnose the case as encephaloma. The surgical operation proved successful

and the patient completely recovered from his illness in 25 days.

Kim Jai Hak (32), a worker living in Sariwon city, North Hwanghai Province, had been suffering for nine years from involuntary movement. This time, too, they succeeded in curing him of his disease by performing an operation on globus pallidus, the subcortical centre.

Operations for supplying the defect of skull or on brain injury are also performed successfully by the members of this section, restoring the patients' working capacity.

Now these kinds of surgical operations are not difficult ones and they are practised with ease in many other countries. But opinions are divided among the medical scientists of the world concerning the materials to be used for replicas.

It is true that metal plates, the ribs, metacarpal bones, or synthetic resins are in use in various countries as materials for supplying the defect of skull, but the members of this surgical section are laying more stress on using home-made synthetic resins and organic glass for the purpose.

The metal plate not only renders it difficult to make a replica of the broken section, but also is very expensive. Moreover, the metal plate does not make an ideal replica to fit in the defect and hinders the subsequent diagnosis, X-ray photograph, and radiation theraphy after the operation.

There are also some defects in the use of the patient's own ribs or metacarpal bones in the operation; first it necessitates the double operation for cutting out the ribs or metacarpal bones, thus lengthening the operation time, and those ribs or bones cut out are liable to reproduce faintly the replica of original skull. To make matters still worse, a few years after the operation, the patched-up part tends to cause gradual atrophy or hypertrophy to press on the brain.

But the synthetic resin or organic glass is easy to make a replica, capable of bringing about close fitness to protect the brain adequately, and causes no accidental symptoms.

It is frequently observed in many countries that the operation for supplying the defect of skull or on cranio-cerebral injury causes the adhesion of meninges to the brain, which results in epilepsy. But the neuro-surgical section of the South Pyungan Provincial Hospital succeeded in avoiding the incidence of epilepsy by inserting a thin vinyl or polyethylene membranes between the meninges and the brain for the purpose of preventing their adhesion. They have already tried this new

operating method on more than 300 cases, most of the patients causing not a single incidence of epilepsy.

Now the surgeons of the said section are successfully curing epilepsy of various origins, a disease so far regarded as incurable, by combining the surgery with the theraphy of Dong-euihak.

They are now performing with good results the most difficult neuro-surgical operation on trigeminal neuralgia, which demand the highest degree of precision.

Yang Jung Gyoo (48), a worker of the tractor repair works in Haijoo, had been suffering for 20 years from trigeminal neuralgia.

The symptom of this disease is characterised by a stinging pain in the face and teeth, which becomes more acute when the patient laughs or speaks.

He did everything in his power to receive medical treatment in the days of Japanese imperialist rule, but in vain; even he sold out his house and land to pay the doctor's fees, only having 18 of his teeth pulled out.

Last year he received treatment at this neuro-surgical section and 15 days after the operation he was given permission to leave hospital with his last bandage removed. So far more than 100 cases of trigeminal neuralgia have been cured completely by this surgical section.

The surgical section has also scored a great success in the operations on spinal diseases, completely curing more than 400 cases of hernia of intervertebral disc, the symptoms of which are a pain in the waist and paralysis of the legs, of spinal tumour causing the lower part of the legs paralised and hindering the flow of urine, and of other spinal complaints.

PULMONARY DISTOMIASIS COMPLETELY ELIMINATED

Pulomonary distomiasis caused by lung flukes is distributed in all parts of the world, especially in the Far East and Southeast Asia.

The lung-fluke found in our country belongs to the family of Paragonimus westermani, which inhabits both the human and animal bodies.

This chronic disease once spread widely in our country—the aftermath of the colonial rule by the Japanese imperialists—and many people suffered from it.

After liberation, our scientists have exerted persistent efforts to eliminate pulmonary distomiasis. Particularly the implementation of the decision adopted at the Presidium of the C.C. of the Workers' Party of Korea on May 4th, 1958, "On organizing and developing the public health work as a nation-wide movement," was of decisive importance in eliminating pulmonary distomiasis. Thus this age-old chronic disease has been disappeared completely in our country.

Then how could we cope with the disease?

To begin with, we will introduce here our new method of treatment for the cases of pulmonary distomiasis (lung type).

Emetine as an alleged specific remedy for pulmonary distomiasis is in wide use in various countries, but emetine injections produce acute secondary effects, the symptoms of which are: enervation of the limbs, staggering, nausea, vomitting, diarrhoea, dizziness, atrophy of the skin, low blood pressure, and weakened heart which might lead one to death. And the frequent return of the disease is another drawback of this emetine treatment.

To overcome all these defects our scientists and health workers introduced a new method of treatment—the use of emetine in combination with the vaccine of powdered lung-flukes. The dosage and consistency of the vaccine solution are to increase gradually from 0.1 ml of 1/250 solution up to 1 ml

of 1/25 solution. The new method made it possible to considerably prevent the recurrence of pulmonary distomiasis.

However, this new method, too, was unable to prevent the ill effects mentioned above. The patient demanded for a more efficacious remedy, free from ill effects, easy to take and capable of curing the disease in the shortest time.

Our researchers succeeded through their persistent research work and experiments in synthesising a new medicine "Distomin." This new medicine requires the patient to take it only for 6 days at the ratio of 0.2 gram per one kg of bodyweight to kill the flukes in his lungs.

Emetine is not allowed to be used for the patients with heart, kidney or liver troubles and, if allowed, it is under strictly limited conditions. But "Distomin" has the advantage to be applied to all cases with less restrictions.

Compared with emetine, "Distomin" produces almost no ill effects and, if there are any, they are of temporary nature disappearing immediately.

And "Distomin", being an internal medicine, has much advantage for treatment over the hypodermic emetine.

Whereas the emetine treatment—intravenous injections of emetine for 15 days in succession between the intervals of 15-20

Members of the sanitary-epidemiological station who have invented "Distomin", a specific cure for pulmonary distomiasis

days—must be repeated three times, the patient taking 45 injections in a span of three months, "Distomin" can cure the disease completely in a short period of time.

The invention of "Distomin" and Distomin treatment made it possible to decisively conquer the distomiasis in our country.

Pulmonary distomiasis includes cerebral infection of lung-flukes (cerebral type). This disease occurs when cercariae once entered the lungs, migrate into the cranium breaking through the thin membrane which covers the carotid artery, and thence into the brain. Hence, the disease is also known as cerebral paragonimiasis.

The symptoms of this disease in its early stage are an acute headache and high fever and, later as the disease develops, the patient suffers from the paralysis of his limbs, has a fit like that of epilepsy and finally becomes disabled for life.

With no other methods available in treating cerebral paragonimiasis, so far scientists in various countries have used intravenous injection of emetine with little effect. But the emetine injection into the carotid artery introduced by our scientists has made it possible to effectively kill the flukes inhabiting the brain.

As seen above, our country registered a great success in treating both pulmonary distomiasis and cerebral paragonimiasis.

But, no matter how good the method of treatment is, it cannot achieve good results unless it is accompanied by preventive measures.

With this in view, the distomiasis centres set up in the affected areas took active precautionary measures, while treating distomiasis by the new methods mentioned above.

These distomiasis centres are staffed with Doctors of Medicine, teachers and students of various medical colleges, as well as with competent public health workers.

The staff of the centres, while carrying on propaganda and lectures on preventing distomiasis, actively mobilised inhabitants and students in the affected areas to an energetic struggle to wipe out the fluke-carriers—water snails, crabs and crayfishes. At the same time they ranged ducks to devour water snails, killed them by creating dynamic heads, and used chemicals to exterminate water snails and crayfishes.

Unwholesome wells, one of the major factors in spreading distomiasis, have been improved; filters, or waterworks have been laid in the areas where water is unfit for drinking.

The steady rise in the living standards of our people, the

improvement in the hygienic conditions of their environment as well as a marked progress in their knowledge on public health and sanitation have brought about the disappearance of distomiasis, or its recurrence, in the infectious areas.

Here is an impressive story.

Towards the closing days of Japanese imperialist rule, Kyejung village in Keumchun County, North Hwanghai Province, was completely devastated by distomiasis. Hence the name "Devastated Village," and this was not without reason, because most of the villagers, unable to receive medical treatment, used to die before 40 years of age.

The Japanese imperialists tried to mitigate the complaints of the people in such areas by alleging that distomiasis is a "hereditary disease" coming down from their ancestors, or "an endemic disease" caused by harmful physical conditions in certain localities.

The villagers of Kyejung today, however, have completely rid themselves of distomiasis thanks to the active measures for prevention and cure of the disease carried out under the people's power. And it is now renamed "Village of Longevity." Today, the people of this village are all enjoying good health.

The peasants, whose living standands have reached the level of the former middle or well-to-do middle peasant, are now living in a good, modern house built in place of their age-old hovels, knowing no worries about food and clothing.

Thus pulmonary distomiasis was completely eliminated in our country by 1961.

All these achievements are attributable to the fact that the public health services are placed under the undivided control by the state, to the introduction of free medical treatment and active preventive measures preceding treatment.

GLORIOUS MEDICAL HERITAGE OF KOREA

Dongeuihak with its time-honoured tradition constitutes one of our glorious scientific heritages.

In ancient times therapeutics in our country chiefly depended on drugs, acupuncture and cautery, and our forefathers' knowledge about medicinal substances was further enriched by the discovery of ginseng.

Ginseng, called Shincho (divine grass) or Suncho (heavenly herb) as an elixir vitae, was a valuable medicament known widely beyond the borders of our country already at that time.

Acupuncture and cautery were in wide use in old Korea. Proof of this has been provided by our ancient relics—the stone needles found together with stone knives and stone gimlets. *Suwen Ifa Fangilun,* one of China's oldest extant medical books, states: "Stone needle found its way to China from the East (Korea—Ed.)."

Dongeuihak, which had laid its foundation already in the ancient period, made further development in the period of the Three Kingdoms—Kokuryo (37 B.C.—668 A.D.), Baikje (18 B.C.—660 A.D.) and Silla (57 B.C.—935 A.D.).

During the period of the Kokuryo Dynasty stone needle gave place to iron needle, while Baikje further advanced its folk remedies on a new track and Silla rearranged and systematised its unique therapeutics.

Dongeuihak attained a very high level of development in those times. Suffice it only to refer to the fact that Duk Rai of Baikje and many other eminent physicians went to Japan and imparted Dongeuihak to the Japanese, and Kokuryo and Baikje received many Japanese medical students who came to learn Dongeuihak.

Baikje Sinjipbang and *Silla Bubsabang,* both Korea's old

books on medicine written some time during the period of the Three Kingdoms, contain the folk remedies and clinical experiences up to that time.

Special mention should be made of the fact that remarkable progress was made in pharmacology already in the days of the Three Kingdoms. In those days people had already found a cure for rheumatism using the root of Euiari or Clematis mandshurica maxim (this recipe is still in wide use), and the people of Kokuryo produced insecticide from the seed of an elm tree.

Their knowledge on medicinal substances was not confined to those of botanical origin, but extended to those of zoological origin (centipede, ox's gall bladder, etc.) and of mineral origin (native copper, gypsum, etc.)

Silla made a considerable advance in acupuncture and cautery. Historical data show that Silla exported some 400 acupuncture needles to Tang (China) in 652 A.D. during the reign of King Moonmoo and made a marked progress in its studies of the Kyungrak theory—the core of Dongeuihak.

With the rearrangement of medical and educational systems in the centre and localities in the period of Koryu (918-1392), Dongeuihak was further enriched and systematised and embarked upon a new stage of development. Sul Kyung Sung, the most distinguished physician of Koryu, was not only renowned at home for his erudite medical knowledge and excellent clinical technique, but his fame even reached the Yuan Dynasty (China).

Koryu's medical books—*Jejoong Riphyobang* by Kim Yung Suk, *Ueui Chalyobang* by Choi Jong Joon, *Jinmaik Dokyul* by Jung Do Jun, *Hyangyak Koogeupbang,* etc.—contain various methods of treatment based on the study of Korean herb medicines and the experiences accumulated in their use.

Along with the study on the medical theraphy, the research into acupuncture and cautery also scored remarkable success. Doctors of Medicine and of Kyungrak theory were dispatched to cities and towns for the purpose of spreading medical knowledge.

In the Li Dynasty (1392-1910), successor to the Koryu Dynasty, the fine achievements made in the study of Dongeuihak in

the preceding period were synthesised and Dongeuihak developed to a still higher stage. High officials at the early period of the Li Dynasty all displayed keen interest in medical science and King Sejong and King Sejo personally wrote books on medicine. This had a positive effect on the further development of medical science.

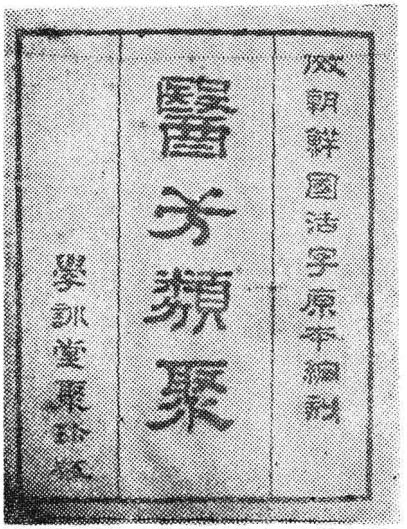
A state examination system was put into practice for the selection and promotion of medical workers; and in 1406 measures were taken to train women doctors for the first time in our country. Furthermore, Korea maintained broad contacts with Ming (China), Japan and Southeast Asian countries to carry out exchanges in the field of medical science.

As medical activities became brisk, analytical studies of Dongeuihak were widely conducted. The results of the research work were contained in a series of medical books of encyclopedic dimensions such as *Hyangyak Jipsungbang, Euibang Ryoochui* and *Dongeui Bogam,* and other medical treatises on special etiology.

These medical books were widely known even in foreign countries.

Hyangyak Jipsungbang, our first comprehensive medical document whose appearance was of epochal significance in the development of our medicine in the 15th century, covers a very wide range of subjects—internal medicine, surgery, pediatrics, obstetrics and gynaecology, ophthalmology, otorhinolaryngology, dental surgery and pharmacology (herbal), etc. It lists 10,706 prescriptions based on the medicinal substances available at home and 1,476 diverse methods of treatment by acupuncture and cautery. The book not only gives scientific and systematic descriptions of the etiological causes, methods of diagnostics, therapeutics and prophylaxes, but also advocates an advanced view that there must be rational regulation among life, exercise and labour.

Another important medical book which appeared in the same period was *Euibang Ryoochui* (365 volumes) compiled jointly by Ro Joong Rye and other prominent scientists. The compilation of this vast medical encyclopedia was completed in 1445. It is generally acknowledged among the European scholars that the *Medical and Surgical Dictionary* (7 volumes) published in Madrid, Spain, is the world's first medical encyclopedia, but *Euibang Ryoochui* precedes it by 400 years.



Euibang Ryoochui (365 volumes), the first medical encyclopedia in the world, was originally printed in 1445. Photo shows the cover of the Japanese edition reprinted after the Korean original

Euibang Ryoochui, which synthesised and codified the medical achievements made at home and in other countries in the East up to the early 15th century, covers all kinds of medical problems including the fundamentals of Dongeuihak and diseases of various clinical entries, and gives detailed descriptions of the etiological causes, pathology, symptoms, therapeutics and preventive measures.

The authors exhaust all clinical problems from the standpoint of combining theory with practice, of paying attention to the mutual reaction between the human body and natural environments, and advocates their progressive view that prevention is the first essential.

The authors, proving it unreasonable to apply the same prescription to the same kind of disease, irrespective of the sufferers, strictly abided by the principle of applying different prescriptions according to personal characteristics of the patients. This is the principle of individualisation, the main feature of Dongeuihak. Besides these two books, *Dongeui Bogam* (written in 1610 by the well-known physician Huh Joon) also occupies important place in the history of our medical science.

This book is a sort of medical encyclopedia, which summed up and systematised the achievements made so far in Dongeuihak and further developed it.

Huh Joon, pointing out in his book that Korean medicine with its peculiar traditions had steadily developed, explained the reason why he came to name his book *Dongeui Bogam:* "Considering that our country is situated in the East and our medicine has developed along an unbroken line, it may be called Dong-eui (Eastern medicine)."

Dongeui Bogam, supplemented by a preface and a table of contents, consists of 25 volumes dealing with internal medicine, surgery, miscellaneous ailments and decoction.

In his book the author, advocating his prevention first theory, lay more stress on the moderation in daily life than the healing art by drugs, acupuncture and cautery, and made it a point to observe pathological symptoms in relation to the functions of human organism.

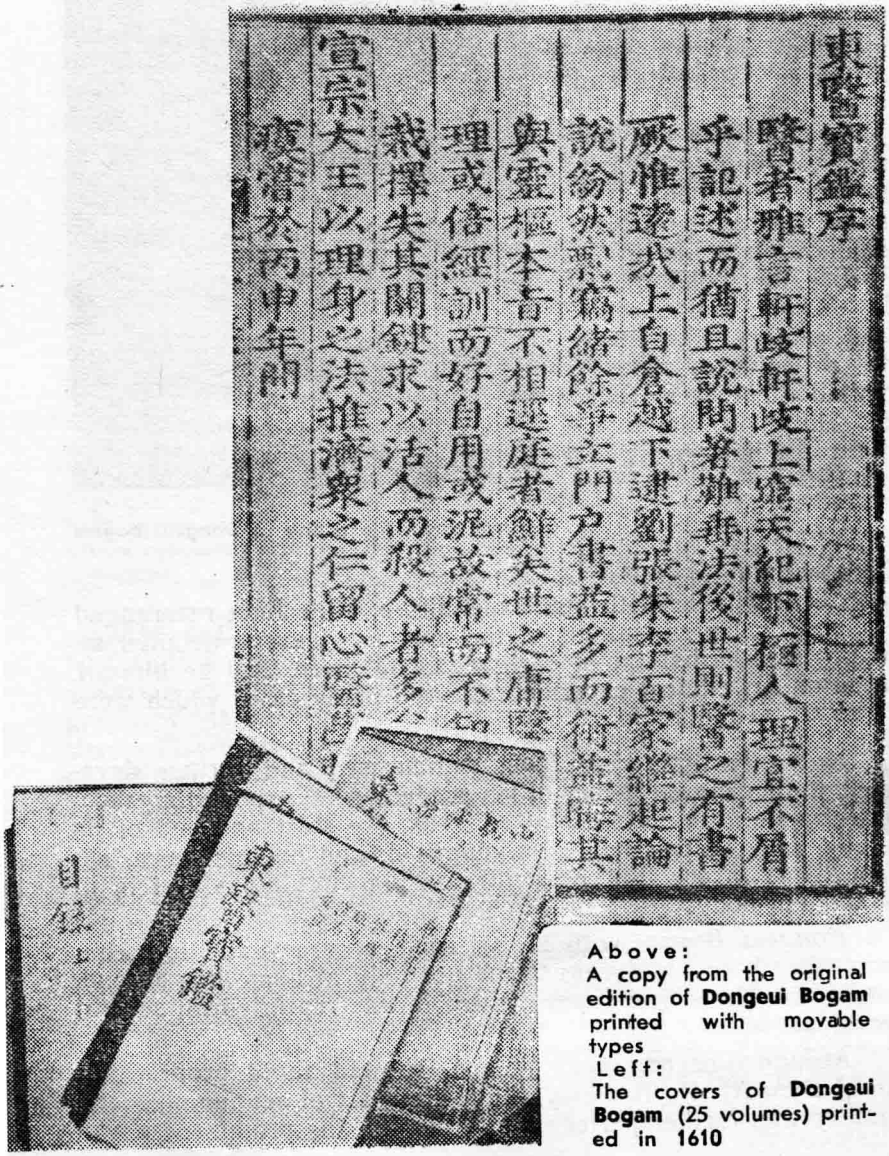
Huh Joon, the author of **Dongeui Bogam**

At the same time, with a view to enabling the poor folks to receive medical treatment with less expenditure, Huh Joon rearranged and modified prescriptions of the past and gave a detailed account of the habitat of each medicinal herb, and he himself, based on his clinical experiences, cured many cases which were regarded as incurable.

Not only that, Huh Joon, summerised and further developed the Kyungrak theory of his predecessors, expounding theoretically the distribution of Kyungrak, the start and end of its circuit and the positions of Kyunghyul, and on this basis, advanced his theory that Kyungrak was a circulation system in the human body.

Dongeui Bogam with its scientific accuracy and folk character has been highly appraised not only at home but abroad, notably in China and Japan, where it was reprinted on several occasions.

Acupuncture and cautery, too, showed rapid progress in the Li Dynasty. Particularly, the healing art of acupuncture and cautery was further perfected by Huh Im, the prominent physi-


東醫寶鑑序

醫者雅言軒岐軒岐上遡天紀而相人理宜不屑乎記述而猶且說問著難乖法後世則醫之有書厥惟遠哉上自倉越下逮劉張朱李百家繼起論說紛然要竊緒餘爭立門戶書益多而術益歧其與靈樞本旨不相遵庭者鮮矣世之庸醫理或倍經訓而好自用或泥故常而不知裁擇失其關鍵求以活人而殺人者多矣

宣宗大王以理身之法推濟衆之仁留心醫藥於丙申年間

Above:
A copy from the original edition of **Dongeui Bogam** printed with movable types

Left:
The covers of **Dongeui Bogam** (25 volumes) printed in **1610**

cian of Korea in the 17th century, through the introduction of his *Chimkoo Bosabup* (a new and original healing method by acupuncture and cautery). Huh Im wrote his *Chimkoo Kyunghumbang* (a thesaurus of acupuncture and cautery) in 1644, drawing on his clinical experiences he had gained as a highly-gifted medical authority and on his comprehensive study of many medical books so far known.

Also each branch of medical science made a big advance in the Li Dynasty. During this period, internal medicine, surgery, obstetrics, contagious diseases, ophthalmology, hygienics and otorhinology were all divided into separate branches, which were followed by a considerable progress in medical jurisprudence, pharmacology (herbal) and veterinary.

Medical books on various branches of medicine were published in a large number. To name a few, there appeared *Taisan Yorok* dealing with obstetrics, *Ibi Junsu* with otorhinology, *Sikryo Chanyo* with diet and nutrition, *Keupyoobang* with pediatrics, *Makwa Hoitong* with measles, *Sinchan Byukonbang* with contagious diseases, etc.

As seen above, each branch of medical science advanced considerably during the period of the Li Dynasty. In the branch of tuberculosis which was called Rochaichoong, our medical scientists had already found in 1610 the etiological cause of the disease prior to the discovery of tuberculosis germs in 1882 by Western medicine, gave detailed descriptions of the source and route of infection, and provided for correct preventive measures and curative methods.

Of particular importance in the development of Dongeuihak in the 19th century was the introduction of Sasang Euihak (medicine based on four types of constitutions) by Li Je Ma, one of Korea's prominent medical scientists. Li Je Ma proved that constitution and character of men are distinct from each other and, accordingly, a disease of the same cause takes a different course of development and requires different medication according to the different constitution and character of the patients.

After many years of strenuous study and clinical experiences, Li Je Ma classified the constitutions and characters of men into four types: Tai-eum (greater negative) and So-eum (small negative), Tai-yang (greater positive) and So-yang (small positive). On this basis he worked out his original system of prescription according to different constitutions and characters of the patients.

True, many scientists of the world classified the constitutions of men into four types, but the significance of Li Je Ma's theory on four types of human constitutions was that it did not remain a mere theory, but was put into clinical practices.

Li Je Ma systematised his medical theories and clinical experiences and wrote in 1892-94 his medical book, *Dongeui Soose Bowun.*

However, the development of Dongeuihak was interrupted by the Japanese imperialists' occupation of Korea in 1910. And it was only after the country's liberation in 1945 that Dongeuihak again began to develop and flourish thanks to the correct policy of the Workers' Party of Korea—the policy of establishing Jooche in science and public health work and of inheriting and developing Dongeuihak with the simultaneous development of modern Western medicine.

At present, Dongeuihak with its original methods is registering successes in curing various diseases for which modern Western medicine has found no remedies.

As seen above, Dongeuihak which has come into being through the excellent talent and creative efforts of our people over a long period of history has traversed, and are traversing, the glorious path of the original national medicine of high scientific accuracy, while conducing greatly to the promotion of the health of people and to the development of medical science of the world.